



SHCI7M SERIES HIGH CURRENT INDUCTOR



ALL PARTS AVAILABLE AS CLASS S OR CLASS B

MIL-STD-981

Inductance Range	DCR max (Ohms)	Current Rating (A)
0.40 uH - 10 mH	0.008 - 18.9	9.4 - 0.18

ALL DIMENSIONS: INCHES

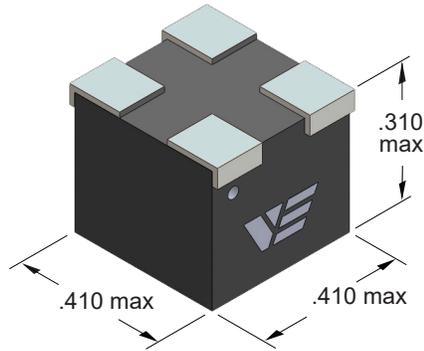
THRU-HOLE &
GULL-WING PACKAGES ALSO
AVAILABLE

ELECTRICAL SPECIFICATIONS

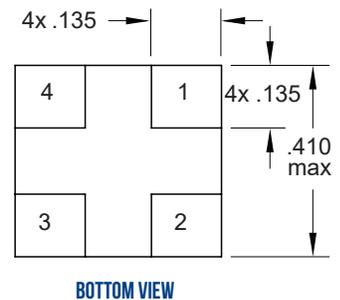
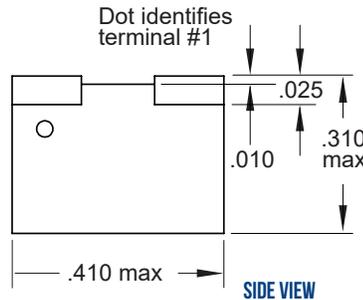
- **Operating Temperature:** -55°C to +130°C
- **Storage Temperature:** -60°C to +135°C
- **Temperature Rise:** < 30°C
- **Dielectric Withstanding Voltage:** 100 V_{RMS}
- **Different electrical values available upon request**

FEATURES

- **Compact**, low profile, ideal for automatic placement
- **Terminations:** Tin-lead
- **Welded Internal Connections**
- **Moisture, Shock and Immersion Resistant**
- **Magnetically Shielded**
- **Other termination finishes available upon request**
- **Multiple Configurations:** Series, parallel, transformer, dual inductor
- Built to meet **MIL-STD-981** specifications
- **NASA outgassing compliant per ASTM E595** (TML <1%, CVMC <0.1%)



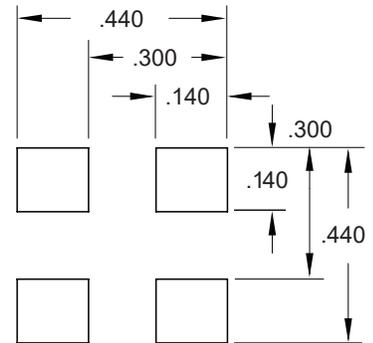
MARKINGS: LASER ETCH OR INK



APPLICATIONS

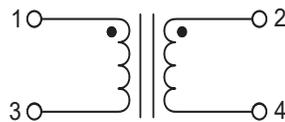
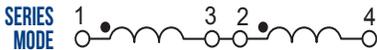
- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters
- Isolation transformers

IN	MM
0.440	11.18
0.410	10.41
0.310	7.87
0.300	7.62
0.140	3.56
0.135	3.43
0.025	0.64
0.010	0.25



TYPICAL USER CONNECTIONS

SCHEMATIC



CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types





DATA TABLE

Vanguard P/N	Series Inductance (uH)	Series DCR max (Ohms)	Series Rated Current (Adc)	Series Inc. Current ΔL 10% (Adc)	Series Inc. Current ΔL 20% (Adc)
SHCI7M-161M	1.6	0.030	4.7	6.3	8.7
SHCI7M-371M	3.7	0.040	3.9	4.2	5.8
SHCI7M-651M	6.5	0.050	3.5	3.1	4.3
SHCI7M-102M	10.0	0.060	3.2	2.5	3.5
SHCI7M-252M	25.0	0.090	2.7	1.8	2.5
SHCI7M-502M	50.0	0.140	2.1	1.1	1.6
SHCI7M-752M	75.0	0.160	2.0	0.96	1.3
SHCI7M-103K	100.0	0.190	1.8	0.84	1.2
SHCI7M-253K	250.0	0.700	0.91	0.52	0.72
SHCI7M-503K	500.0	1.60	0.60	0.37	0.51
SHCI7M-753K	750.0	1.70	0.58	0.25	0.35
SHCI7M-104K	1 mH	2.50	0.48	0.22	0.30
SHCI7M-204K	2 mH	4.40	0.36	0.15	0.21
SHCI7M-304K	3 mH	5.50	0.33	0.12	0.17
SHCI7M-504K	5 mH	10.5	0.23	0.09	0.12
SHCI7M-754K	7.5 mH	16.3	0.19	0.07	0.10
SHCI7M-105K	10 mH	18.9	0.18	0.06	0.09

Vanguard P/N	Parallel Inductance (uH)	Parallel DCR max (Ohms)	Parallel Rated Current (Adc)	Parallel Inc. Current ΔL 10% (Adc)	Parallel Inc. Current ΔL 20% (Adc)
SHCI7M-161M	0.400	0.008	9.4	12.5	17.3
SHCI7M-371M	0.925	0.010	7.8	8.4	11.5
SHCI7M-651M	1.625	0.013	6.9	6.3	8.7
SHCI7M-102M	2.50	0.015	6.3	5.0	6.9
SHCI7M-252M	6.25	0.023	5.3	3.6	4.9
SHCI7M-502M	12.50	0.035	4.3	2.3	3.1
SHCI7M-752M	18.75	0.040	3.9	1.9	2.7
SHCI7M-103K	25.00	0.048	3.7	1.7	2.3
SHCI7M-253K	62.50	0.175	1.8	1.0	1.4
SHCI7M-503K	125.0	0.400	1.2	0.74	1.0
SHCI7M-753K	187.5	0.425	1.2	0.51	0.70
SHCI7M-104K	250.0	0.625	0.96	0.44	0.60
SHCI7M-204K	500.0	1.10	0.72	0.31	0.43
SHCI7M-304K	750.0	1.38	0.65	0.25	0.35
SHCI7M-504K	1.250 mH	2.63	0.47	0.18	0.25
SHCI7M-754K	1.875 mH	4.08	0.38	0.15	0.20
SHCI7M-105K	2.500 mH	4.73	0.35	0.13	0.18

1/ Inductance measured at 10 kHz, 0.1 V_{RMS}

2/ DCR measured at room temperature

3/ Current Rating is based on a 30°C maximum temperature rise at an ambient temperature of 100°C

4/ Incremental current is the approximate value that will result in a percentage drop of inductance as indicated in the table

5/ Maximum Weight: TBD

6/ Units are series mode tested only, parallel mode values are reference only

CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCI7M SERIES





VE PART NUMBER STRUCTURE KEY

INDUCTANCE (uH) (mH)

161 = 1.6 uH
103 = 100 uH
105 = 10 mH

EXAMPLE: SHCI7M-161MS-3-T

TOLERANCE (%)

K	± 10
M	± 20

TERMINATION

S	SnPb
---	------

RELIABILITY

2	Group A MIL-STD-981
3	Group A+B MIL-STD-981
4	Group A+B+C MIL-STD-981
7	Other

PACKAGING (Default Bulk)

B	Bulk
T	Tape and Reel

Tape and reel specs
Pcs. / reel maximum: (13") 430
Pitch between parts: 16 mm
Tape width: 24 mm

Parts that don't meet minimum reel requirements will be supplied on cut tape

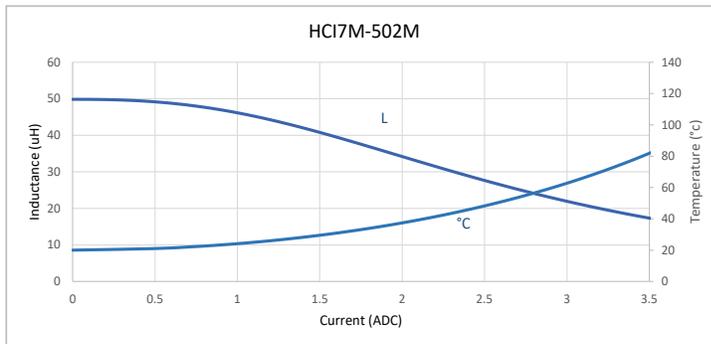
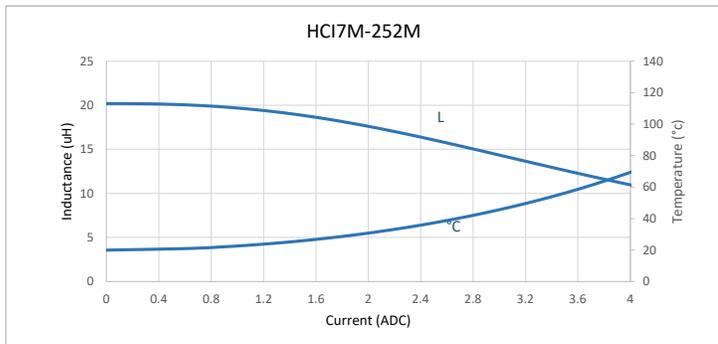
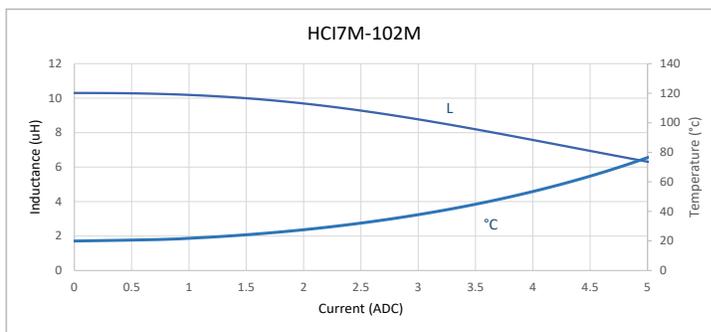
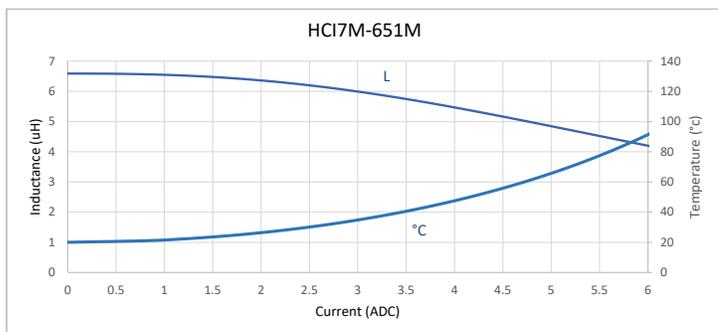
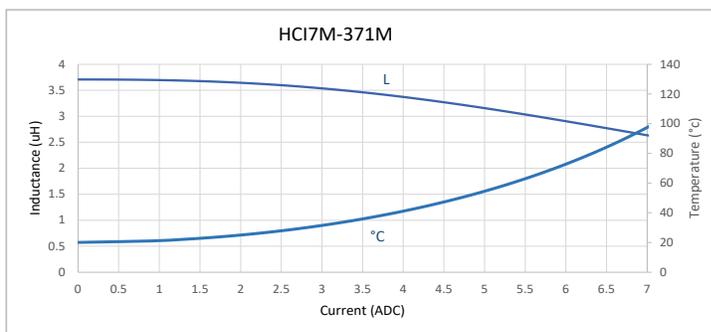
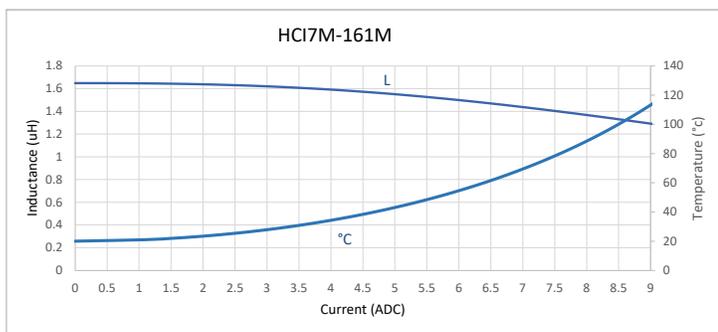
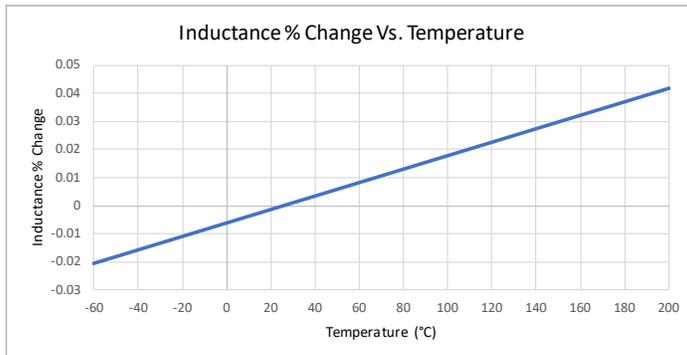
Tape and Reel not available for Thru-Hole or Gull-Wing Packages

CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCI7M SERIES



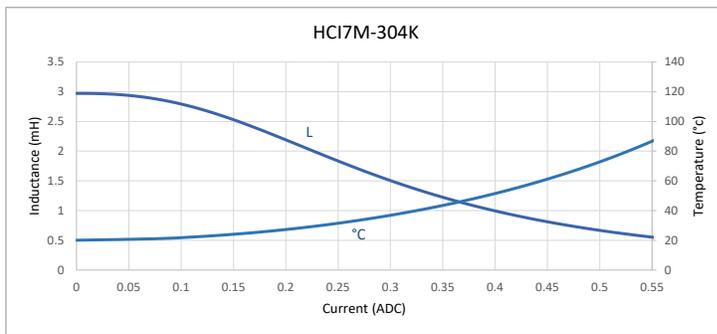
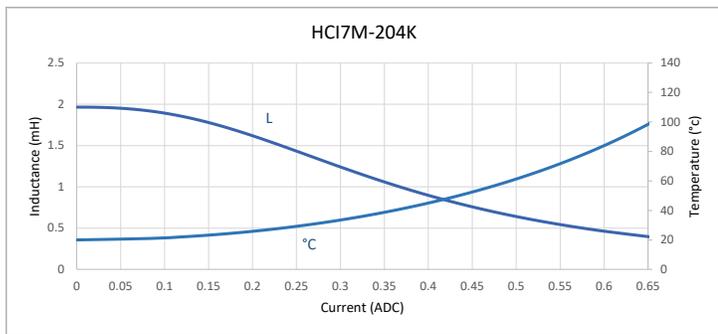
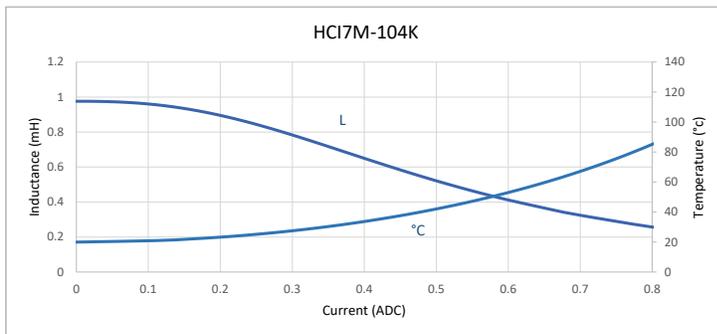
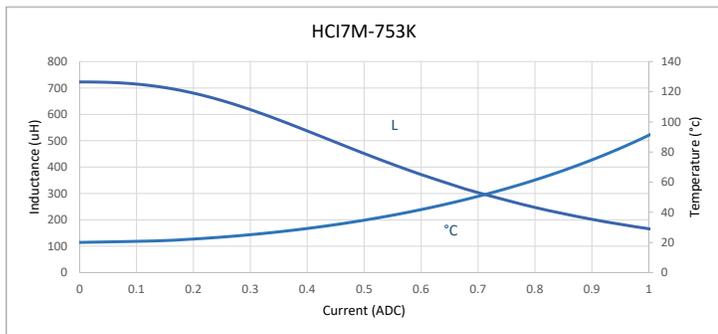
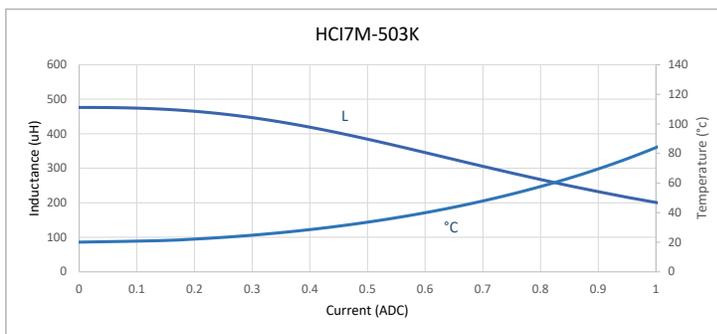
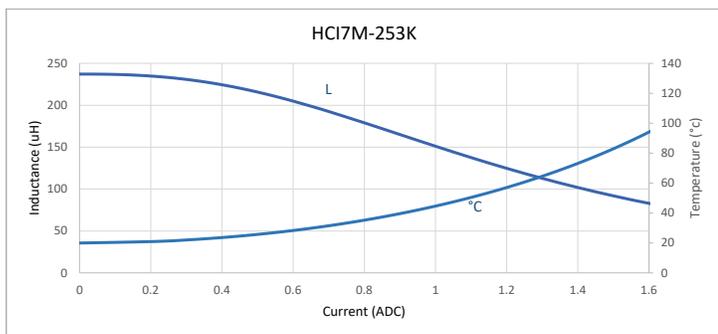
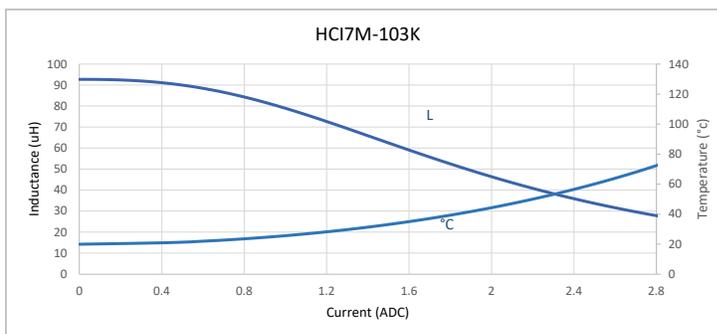
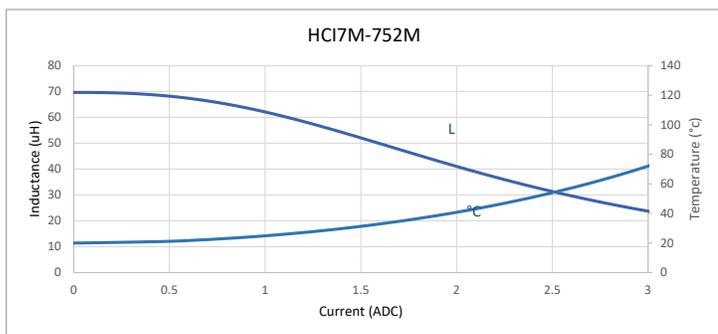


CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCI7M SERIES



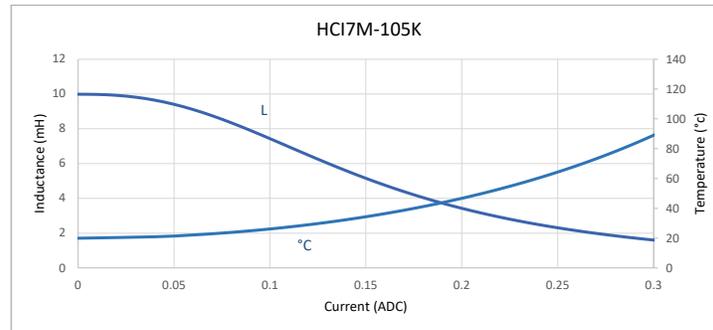
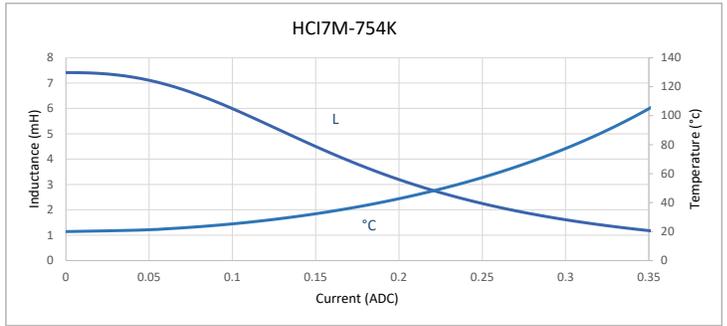
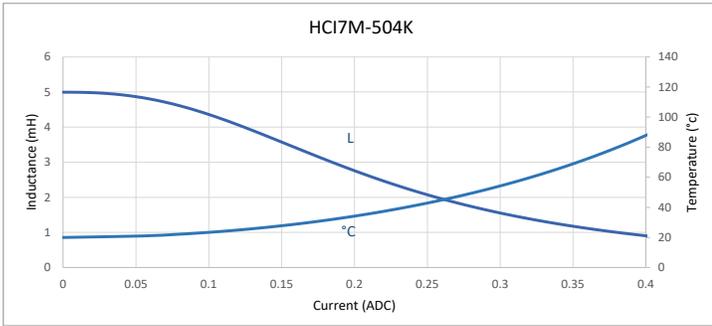


CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCI7M SERIES





CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

SHCI7M SERIES

